

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference B14384.3 AP	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/FR2004/050297	International filing date (<i>day/month/year</i>) 30.06.2004	Priority date (<i>day/month/year</i>) 02.07.2003
International Patent Classification (IPC) or national classification and IPC B23K26/28, B23K9/028		
Applicant COMMISSARIAT A L'ENERGIE ATOMIQUE		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of _____ sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:
 - ☐ international search (Rule 12.3 and 23.1(b))
 - ☐ publication of the international application (Rule 12.4)
 - ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
 - ☐ the international application as originally filed/furnished
 - ☒ the description:
 - pages 1-17 _____ as originally filed/furnished
 - pages* _____ received by this Authority on _____
 - pages* _____ received by this Authority on _____
 - ☒ the claims:
 - nos. 1-6 _____ as originally filed/furnished
 - nos.* _____ as amended (together with any statement) under Article 19
 - nos.* _____ received by this Authority on _____
 - nos.* _____ received by this Authority on _____
 - ☒ the drawings:
 - sheets 1/2-2/2 _____ as originally filed/furnished
 - sheets* _____ received by this Authority on _____
 - sheets* _____ received by this Authority on _____
 - ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages _____
 - ☐ the claims, nos. _____
 - ☐ the drawings, sheets/figs _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages _____
 - ☐ the claims, nos. _____
 - ☐ the drawings, sheets/figs _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-6	YES
	Claims		NO
Inventive step (IS)	Claims	1-6	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-6	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

1. Reference is made to the following documents in the present report:

D1: US 4 831 234 A (MYERS) 16 May 1989 (1989-05-16)

D2: US 5 250 782 A (CORDELLE ET AL.) 5 October 1993 (1993-10-05)

D3: DE 198 50 763 C (DAIMLER CHRYSLER AG) 13 April 2000 (2000-04-13)

D4: US 4 577 089 A (OLSON ET AL.) 18 March 1986 (1986-03-18)

2. **NOVELTY: CLAIM 1**

Document D1, which is considered to be the prior art closest to the subject matter of claim 1, describes (the reference signs between parentheses apply to this document):

Means for assembling workpieces comprising at least one weld bead (column 1, first paragraph; column 2, line 67 to column 3, line 5; figures 2, 44, 46, 48) formed by a transparent welding (column 2, line 67, 68; figures 2, 44, 46, 48), wherein at least one weld bead defines at least

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one closed line (column 3, lines 30-36; figures 3, 52, 54) defining an inner area (figures 1, 3, 32, 46).

It follows that the subject matter of claim 1 differs from these known assembly means in that: Each weld bead is provided with a bead start end as well as a bead termination end, and in that at least one of the start and termination ends of the weld bead is located in an inner area.

It follows that the subject matter of claim 1 is novel (PCT Article 33(2)).

3. **INVENTIVE STEP: CLAIM 1**

The problem that the present invention is intended to solve can thus be considered to be that of preventing the start and termination ends of the weld bead, which have cracks as a result of the heat shock occurring at the beginning and end of the welding process, from being the first to yield when subjected to strong mechanical stress, and thereby causing the entire weld bead to give way.

The solution to this problem, as proposed in claim 1 of the present application, is considered to involve an inventive step (PCT Article 33(3)), for the following reasons:

No prior art document describes a weld bead start or termination end that is not subjected to strong mechanical stress. A person skilled in the art seeking to solve the above-mentioned technical problem would thus have to exercise inventive

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skill to solve the stated problem. It follows that claim 1 complies with the requirements of novelty and inventive step of the PCT.

4. **CLAIMS 2 AND 4 TO 6**

Claims 2 and 4 to 6 are dependent on claim 1 and thus also comply, as such, with the requirements of novelty and inventive step of the PCT.

5. **CLARITY: CLAIM 3**

The term "working area" used in claim 3 is vague and equivocal and thus casts doubt on the meaning of the technical feature to which it refers. Moreover, said term appears to be essential to said dependent claim 3. It follows that the subject matter of said claim has not been clearly defined (PCT Article 6). The opinion on this claim, as set forth below, is based on the following interpretation: the working area is the area in which the rigid connection is provided between the two workpieces placed one on top of the other (see the description, page 2, lines 19-23).

Claim 3 is dependent on claim 1 and thus also complies, as such, with the requirements of novelty and inventive step of the PCT.